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ABSTRACT

The purpose of this project was to determine the judgments of teachers regarding the need for future-oriented learning materials at fifth and sixth grade levels. The data were collected from a survey mailed to teachers at 94 Santa Clara County (California) schools, with the emphasis on the teacher's interpretation of his or her own program rather than library or media center materials per se. A high level of interest in future-oriented education was indicated. When measuring the relationship of what is taught with availability of materials to teach the concept, there was a high positive correlation significant at the .01 level. Whenever adequate learning materials were available, the tendency was for the educator to teach that concept. A recommendation was made to provide future-oriented learning materials and/or to start workshops for the development of such materials. (VT)

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A SURVEY TO DETERMINE THE NEED FOR FUTURE-ORIENTED LEARNING MATERIALS GRADES FIVE AND SIX

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the Faculty of the School of Education

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Plan B

By

M. Jeanne Flynn

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Chapter 1

THE PROBLEM AND DEFINITION OF TERMS

INTRODUCTION

> Both the justification and the structure of our educational system are explicitly future-oriented; the child learns, so that the adult can know, do, and be. It therefore seems perfectly straightforward that we should attempt to provide the child with the knowledge, skills, and values that will be appropriate to the world which that child will live in as an adult--the world of the future. (1:4)

During recent years, the importance of future-oriented education has been gaining more attention and recognition, not only at the college level, but also at the secondary and elementary levels. In 1971, the Center for Adaptive Learning, Inc. set about planning a three-year, future-oriented social studies curriculum for tenth, eleventh, and twelfth grades. (2:103-131) Recently, evidence of scholarly interest in this area may be seen by the fact that the University of Minnesota sponsored a Workshop in Futures Education for elementary and secondary educators in June, 1976. (3:104)

In 1972, School 2000 was conceived by Gloria Loventhal and became a part of an alternative educational system at Meyer School in the Alum Rock Union School District of San Jose, California. This intermediate elementary program, incorporating future-oriented learning materials in the regular curriculum, received nationwide recognition. When

Meyer School ended its alternative education system, School 2000 was discontinued. However, the program is still being taught as part of Gloria Loventhal's regular curriculum. It is an excellent example of futures being adapted to existing curriculum. (4:Interview)

In the book Learning for Tomorrow, edited by Alvin Toffler, a number of experts give their views on the future in education. Benjamin D. Singer writes, "The development of a future-time perspective early in life provides both a motive and a means for achievement in the future." (5:25) In the same book, Wendell Bell states, "Our educational institutions need to be refocused on the future so that students can 'learn what they want' and so that they can explore the 'range and quality of experience that should be theirs if things are to be different.'" (6:102)

STATEMENT OF THE PROBLEM

Interest in future-oriented teaching in the elementary classroom appears to be growing. Whether futures is taught as a subject by itself or is incorporated into existing curriculum may vary from teacher to teacher and institution to institution. Because futures is by nature multidisciplinary, it lends itself well to adaptation. With interest increasing, it is feasible that more teachers would like to incorporate this subject matter into their own teaching curriculum, but many of these teachers may have

neither the time nor the necessary background to make such special provisions. If future-oriented learning materials were available for their use, it is possible that many teachers would avail themselves of this material to their advantage and to the advantage of their students.

PURPOSE OF THE PROJECT

It was the purpose of this project to determine the judgments of teachers regarding the need for future-oriented learning materials at fifth and sixth grade levels by means of a survey.

SCOPE AND DELIMITATION OF THE PROJECT

This project was limited to fifth and sixth grade educators in the Santa Clara County public schools. A total of 500 questionnaires was mailed to ninety-four schools in Santa Clara County. A goal of 100-150 returns was established as a reasonable number base for population purposes.

Due to the many possible variations within the population sampling (socioeconomic area teaching in, sex, age, etc.), it was essential that all categories be represented. To insure this, a sincere attempt was made to use a stratified random sampling of the schools in Sarta Clara County.

It is important to note that this study did not include library or media center materials per se; rather, the emphasis was on the educator's interpretation of his or her own program.

DEFINITION OF TERMS

*A future	Singular. A possible course of events; one of many strands in the "web" of alternative futures.
Alternative futures	This term assumes alternative possibilities for the future; more than one possible future; enables one to have choices.
Brainstorming	The unrestrained offering of ideas or suggestions by all members of a group meeting. In futures, an emphasis is placed on alternative possibilities.
DIALOG	An information retrieval system, makes four million references and abstracts available. The system was developed by Lockheed Information Systems and is made accessible through the Cooperative Information Network.
ERIC	(Educational Resources Information Center) is a nationwide information service established by the U.S. Office of Education designed to locate and disseminate the results of educational research and resource information. ERIC consists of two parts: Resources in Education (RIE) and Current Index to Journals in Education (CIJE).
*Exponential growth	Increase of a quantity by a given percentage per unit of time.
*Forecast	A conditional statement about a future possibility.
Future of education	A possible course of future events related to education. Not the same as futures in education.

Future-oriented education	Informal and/or formal classroom exploration of possible, probable, and preferable alternative futures of individuals and of society, and the special problems and opportunities relating to those futures.
*Futures	Plural of "a future" (above); alternative possibilities.
Futures in education	Classes and curriculum exploring varied future alternatives, possibilities, and potentialities growing out of the present moment.
*Futurist	One who practices futuristics. (Also: futurologist, prognosticator, long-range social forecaster.)
*Futuristics	The systematic study, by basically rational or empirical means, of the possible alternative futures of human societies and the special problems and opportunities relating to those futures.
Gaming	In futures: the use of a game that simulates a real life situation. (7:2)
Model	A representation; in futures, a model can represent abstract as well as concrete things and does not necessarily serve as a preliminary plan.
*Possible futures	Those futures that could happen but are not necessarily likely.
*Preferable futures	Those futures that the student feels are desirable, to which they attach some positive value.
*Primary forecast	The extension of a past trend into the future.
*Probable futures	Those futures that are currently seen as having some reasonable probability of occurring.

*Scenario	An imaginative depiction of a possible course of events; often described in the past tense as history by a fictional character living at some future date.
*Secondary forecast	A statement about any future possibility.
Simulation	In futures: a possible (or actual) situation, happening, or event that is modeled, enacted, used in a "game," or used in some other experiential and lifelike manner.
*System	Any mental or physical entity possessing interdependent components, organization, and a boundary.
*The future	In modern futuristics: a spreading "web" or "tree" of alternative possibilities growing out of the present moment; a "zone of potentiality."
*Trend	A pattern of events in the past; the tendency or direction of movement of some past variable.

*See Kauffman, pp. 295-296.

ORGANIZATION OF THE PROJECT PAPER

The project paper was divided into five chapters followed by a bibliography and appendices.

Chapter 1, The Problem and Definition of Terms, stated the problem, the purpose, and the scope and delimitations of the project. Future-oriented terms were also defined for the reader in this chapter.

Chapter 2 covered the Review of the Literature. In this chapter, related literature was reviewed. This was followed by a brief historical background of future studies. Two rationales, one for future-oriented education and the other for future-oriented education at fifth and sixth grade levels, were then presented. Following the two rationales, future-oriented educational curricula, goals and concepts, content and methods, and learning materials were discussed, and several outstanding examples were included.

Chapter 3, Procedures, related the general procedures followed in choosing a population, devising the questionnaire, and the two cover letters, the printing, and the mailing.

Chapter 4, Survey Results and Analysis of Findings, contained the findings of the survey. The methodology used and the results of the survey were discussed.

Chapter 5, Conclusions and Recommendations, presented conclusions derived from the results. Recommendations were made concerning possible future changes that

might be considered for similar research, and future applications stemming from the project survey were suggested.

Chapter 2

REVIEW OF THE LITERATURE

The purpose of this project was to determine the judgments of teachers regarding the need for future-oriented learning materials at fifth and sixth grade levels through the use of a survey instrument. The review of the literature contained related material on future-oriented education so that clarification could be given to those areas which were pertinent to the field. This background material also demonstrated some of the variations within the field of future-oriented education which the educator is apt to encounter. The review covered related literature, a brief historical background, a rationale for future-oriented education, a rationale for future-oriented education at the fifth and sixth grade level, future-oriented curricula, future-oriented goals and concepts in education, future-oriented content and methods, and future-oriented learning materials.

RELATED LITERATURE

The ERIC DIALOG Search

In early March, 1977, an ERIC DIALOG search was conducted by the author and Mr. Bob Johnson, librarian at the Main Library in San Jose, California. The search covered

the years 1967-1977. The ERIC DIALOG search was particularly interesting because the decision was made to use descriptors not listed in the two descriptor catalogs available to the librarians. This was done in order to avoid using the "too broad" descriptor "futures (of society)." The two unlisted descriptors used were "future-oriented" and "futures-oriented." The computer gave a reading of sixty-seven documents in which the words "future-oriented" or "futures-oriented" appeared.

The next descriptor put into the DIALOG system was "instructional materials." Under that descriptor, the computer gave a figure of 14,205 items in ERIC. In narrowing the search, the following descriptors were used with these results:

Number of Articles	Descriptor
841	Intermediate Grades
999	Grade 5
1097	Grade 6
1184	School Surveys

By combining the sets mentioned above, and asking the DIALOG system for a computer readout each time, it was determined that out of a total of sixty-seven articles only one was possibly directly related to surveys on future-oriented learning materials for fifth and sixth grade level. Upon examination of the microfiche copy of this survey, it was found that this item did not relate directly to this project and was not applicable.

All of the DIALOG search articles were carefully screened. Many of them related to higher education; apparently, the descriptors "grade 5" and "grade 6" did not serve to eliminate such items. Those articles which appeared even remotely related and were available on microfiche form were searched. From this culling, an ERIC DIALOG Search Bibliography was formed that included all of the related material. Also included in this bibliography was material not specifically related but of possible research value. The single survey was also included in this bibliography and identified. The items were listed as they appeared in the user's DIALOG search. The reader is referred to the ERIC DIALOG SEARCH BIBLIOGRAPHY in the Appendices portion of this paper for further information.

Michael A. McDanield. "Tomorrow's Curriculum Today"

The ERIC search revealed nothing specifically related to this project. However, there was one future-oriented article with a direct relationship to this project that appeared in the book Learning for Tomorrow: the Role of the Future in Education, edited by Alvin Toffler. (8:399 pp.)

In this book, eighteen leading psychologists, educators, futurists, social scientists, psychiatrists, and humanists have written their views on the book's central thesis: ". . . all education springs from images of the future and all education creates images of the future." The authors view all education as a preparation for the future

and they feel that the future plays a powerful psychological role in education.

The particular article that appears in Toffler's book and that is directly related to this project is "Tomorrow's Curriculum Today," written by Michael A. McDanield. This article describes the objectives, theoretical base, and structure of a new, future-oriented, social science curriculum being developed by the Center for Adaptive Learning. (2:103)

A portion of McDanield's article gives the results of an informal "survey" (or opinion poll) done over a period of time. McDanield asked young people, students, and teachers, "What kind of learning materials will best prepare students for life in the year 2001?" McDanield also asked this same question in one blitz session of less than twenty minutes. The blitz session was also given to young people, students, and teachers. The responses he received resulted in a list of sixteen items. He feels that this list most nearly reflects all of the responses he received over a period of time. (2:104-105)

McDanield's research, and the curriculum being developed, covered grades ten, eleven, and twelve. The higher grade level does not mean that this material was, therefore, unrelated. The list of subject areas for which learning materials are needed could involve all grade levels and was felt to be relevant to fifth and sixth grades.

On pages 127 through 131, Michael A. McDanield

describes books, core texts, and the Teachers Resource and Process Book which were designed for the program. (2:127-131) McDaniel's article served as a primary source for research. It was particularly helpful because of the thorough treatment given to the subject and the broad scope covered.

Draper L. Kauffman, Jr.
Teaching the Future: A Guide to Future-Oriented Education

Another book that was of special importance to the project was Kauffman's, Teaching the Future. (1:296 pp.) Part I of his book contains closely related background material on future studies in which Kauffman presents a rationale for future-oriented education and discusses the objectives of a futuristic curriculum. (2:3-56)

Part II, "Concepts and Methods," is comprised of classroom exercises and includes ways of thinking about the future, trends, forecasting and prediction, alternatives and imagination, the use of models, and systems and simulations in the classroom. (1:59-171) The material is adapted to different grade levels with a possible range going from elementary through college.

Part III, "Special Topics," covers special topics related to futures. These topics are all of general concern to the educator regardless of grade level involved. Educators would have little, if any, difficulty in finding an application, or applications, suitable for their own classrooms. (1:175-226)

The remainder of the book contains most interesting appendices, a thorough bibliography, and a glossary of terms. (1:229-296) The glossary of terms was of particular value in the writing of this paper. Future-oriented glossaries are still rare, and this author wishes to acknowledge a debt of gratitude to Draper Kauffman because many of the terms defined in his glossary were used in this paper.

Other Related Literature

An extensive hand search of the literature was made in addition to, and supplementary to, the ERIC DIALOG search. The hand search covered recent ERIC Indexes, the Education Indexes, and the card catalogs at San Jose State University. Other sources of information were found in the Learning Resource Laboratory located in the Education Building at San Jose State University.

HISTORICAL BACKGROUND

> Futurism, Futuristics, Futurology are all terms used to describe the birth, or perhaps we should say rebirth, of the idea in intellectual circles and academic endeavor that man can indeed shape and, to some extent, control the future. The terms describe a movement that is as old as man in its objectives but as recent as the last fifteen or twenty years in its techniques and its faith in human ability to consciously influence the future. (9:200)

It is interesting that, in tracing the growth of futures studies, there is a parallel between social interest and educational interest. Thomas Carleton traces the

origins of future studies:

> Futures studies have their origins in the industrialized countries during the late 60's. The "Europe 2000" project was initiated in 1966 by the European Cultural Foundation in Amsterdam to study the European society at the beginning of the 21st century. The Club of Rome was constituted in 1969 to initiate studies on "The Predicament of Mankind" which led to the MIT study published as The Limits to Growth. Three international conferences have been held in Norway, Japan and Rumania. In the United States, the World Future Society was founded in 1966 and began publishing its bi-monthly magazine, The Futurist in 1967. Alvin Toffler's Future Shock became a best seller in 1970, although he coined the term in a Horizons magazine article in 1965. In Toffler's recent book Learning for Tomorrow, Billy Rojas, a one-person clearing-house for futures studies, states that "in 1971 about 200 colleges had such offerings; in 1970 the figure stood close to 75; about 30 schools were involved in 1969; perhaps 16 in 1968 and only 3 the previous year. In other words, futuristics has enjoyed an almost exponential growth in academia . . . futuristics is an idea whose time has come." (10:5)

A RATIONALE FOR FUTURE-ORIENTED EDUCATION

The term "future-oriented education" is easily misinterpreted as being solely the study of "futuristics." Although future-oriented education makes use of alternatives, problem-solving, and other futuristic concepts, future-oriented education is education which is conceptually interconnected to the future and endeavors to prepare the student for his or her own future. Future-oriented education can cover all subject areas in an interdependent relationship so that it is assimilated into the broad spectrum of education and becomes an integral part of the child's learning experience.

In his book Teaching the Future, Draper Kauffman, Jr. devotes his first chapter to "Why Teach the Future?" He indicates that education is a process that is explicitly future oriented in that ". . . the child learns so that as an adult he can know, do and be." All education is, in some manner, a preparation for the future. Kauffman brings out the fact that times we live in are unlike previous times in history:

> . . . the times are "interesting" not just because the dangers we face are so great, but because the problems we must cope with are so complex. It is not just the pace of change, but the increasingly interconnected nature of our society and the entire planet, that makes it so hard to cope. Each action, social innovation, or technological invention has potential impacts on many different parts of society and on many different areas of the globe. (1:7)

Kauffman explains that the above dilemma is compounded ". . . because the problems we face are increasingly long-range problems which require anticipatory action, often far in advance of the crisis point, if a disaster is to be averted." (1:8-9) Another, rather salient, reason Kauffman gives for teaching the future comes under the term "delayed gratification." He writes:

> As long as we "sell" education to young people (and their parents) in terms of its future benefits, we have a fundamental obligation to them to provide them with an education that will be of benefit. If we offer them an education that is conspicuously unconcerned with the world they will live in, they are entitled to doubt our good sense. If we repeatedly promise them intrinsic benefits that clearly will not be forthcoming, they are entitled to conclude that we are dishonest and hypocritical. (1:10-11)

Over half a century ago Franklin Bobbitt, a

professor of educational administration at the University of Chicago, became noted for his works advocating curriculum reform. Philip W. Jackson, in his article on Bobbitt published in the Anniversary Edition of the Elementary School Journal, writes that in the 1921 and 1924 articles Bobbitt

> . . . charges that the curriculum lacked vitality, that it was unrelated to the world of reality outside the classroom. . . . this unrelatedness, this separation, was of two sorts: There was first the failure of the curriculum to take into account the nature of the child, his present longings and interests. Second, there was the additional failure of education in general and of curriculum-makers in particular to consider the future toward which the child is headed, those adult-like concerns and activities for which the school, allegedly, was a preparation. (11:123)

Carl Jung touched deeply on the meaning of future-oriented education in his work The Psychology of the Unconscious, written in 1953. Jung comments:

> A man is only half understood when we know how everything in him came into being. If that were all, he could just as well have been dead years ago. As a living being he is not understood, for life does not have only a yesterday, nor is it explained by reducing today to yesterday. Life has also a tomorrow, and today is understood only when we can add to our knowledge of what was yesterday the beginnings of tomorrow. (12:45)

There are lighter and more personal reasons for teaching the future according to Draper Kauffman:

> . . . it is fun. Teachers who have experimented with future studies are unanimous in reporting the tremendous popularity of these courses . . . the high level of student interest and involvement, and equally high levels of teacher satisfaction. (1:12)

Richard E. Gross, Director of Teacher Education at Stanford University, feels that the future "has to be an identified order of study." He does not advocate separate

courses on futurism, but suggests that the future should be "a regular feature of learning experiences throughout the curriculum." Richard Gross states in his article:

> . . . I think we should affirm the basic premise of education: that schools and teachers do make a difference; not as vendors of platitudes and the inconsequential, but as catalysts and joint explorers who help enable society to bring up its young as functioning humans of excellence who can join hands, overcome the doubts of our era, and shape their own destinies, helping assure a worthwhile future. (13:104)

In "Tomorrow's Curriculum Today," Michael McDanield states some interesting reasons for future-oriented education. "A course in the future . . . enables students and teachers to work together naturally and with more equality and more cooperation." He feels that students will have to learn to do their own thinking and creating because there is no content requiring the usual memorization. McDanield then states a key concept:

> A focus on the future, the long future, forces the emphasis from "education for change," with its concern for immediate relevance, to an emphasis on "education about change," the study of the general nature of change and broad categories of change which will persist over a long time span. It allows the student to specify the change with which he is concerned, state his preferences for the direction of that change, and determine courses of action to influence that direction. (2:124)

Sheldon Brown also discusses "why future studies" in his article "Future Studies and the Bicentennial." Brown believes that futures studies offer an excellent opportunity ". . . to reinstill a feeling of psychological well-being, to rekindle the belief that this is essentially a great and good society which can meet adversity and prevail . . . ."

Brown agrees with other authors in that the future provides an area of high interest for students. He also states:

> Future studies can help develop the intellectual skills and democratic attitudes which are held to be the objectives of all education. Students' abilities to investigate, analyze, speculate, evaluate, stretch their imaginations and creativity, and rethink the values of a democratic society can be enhanced by future studies. (9:202)

Draper Kauffman, Jr. has written a most thorough and intensive chapter on the subject "Why Teach the Future?" in his book Teaching the Future. The reader is referred to this outstanding source in which Kauffman not only gives his own "whys" but quotes numerous authors' and educators' "whys" for teaching the future.

A RATIONALE FOR FUTURE-ORIENTED EDUCATION AT THE FIFTH AND SIXTH GRADE LEVELS

When the subject of future-oriented education is linked to fifth and sixth grades, a not unusual response has been to ask whether or not children at this grade level are too young for a study of future-oriented education. One fifth grade teacher who was interviewed told the writer that her children are actually at third and fourth grade levels in skills and comprehension and would probably not be able to grasp future concepts. (14:Interview) Another fifth grade teacher uses futures as a regular part of her curriculum and the children become highly future-oriented during the time they are in her class. (4:Interview) Both teachers are highly motivated and dedicated in their profession.

The first teacher has not developed an awareness of the future in education while the second teacher has studied futures and has developed a future-oriented curriculum. Both teachers are basing their statements upon their individual experience. A review of what experts have to say may be revealing and helpful.

Benjamin D. Singer in his essay "The Future-Focused Role-Image" says:

> The sense of time, as it is expressed by the child, seems to commence between the ages of two and two and a half, for it is at that age when words designating the future begin to appear in the child's talk. Before the process of role-taking begins in earnest, words dealing with the future are tied to activities and concrete events, and then, by the end of the third year, the child begins to comprehend future roles. The individuals in his immediate milieu provide him with tentative identifications and expectations that help to form his own identity. It is at this point that differences begin to become apparent in the parents' behavior toward the child that then seem to condition the development of different time perspectives, aspirations and the necessary behavior to achieve them. (5:23)

Dennis Livingston, science fiction advocate, says that he would not distinguish among the various grade levels. He feels that "A futuristic course is as necessary and feasible in a grade school as in a free university; imaginative experiential exercises can be tried in graduate school or kindergarten." Livingston goes on to suggest that both teachers and students may adapt whatever he says to their own needs and environments. (15:237)

In 1962, Shirley Moore reported on a Science Service study in "Science News Letter." This study, which was done

for the National Science Foundation, presented statistical evidence of a science interest peak at age twelve. In her report she states,

> Graphic evidence of the science-susceptibility of this age group was found in a Science Survey study of the 387 high school students who were finalists at the 13th National Science Fair-International. . . . Nearly 16% of the high school sophomores, juniors, and seniors reported that their interest in science was sparked when they were 12 years old. (16:178)

Moore further reports that exactly half of the 12-year-olds became interested through school, with most of them crediting their teachers. This same report shows other peak ages with 10-year-olds next in original science mindedness, having a 12.5 percent score. The 11- and 13-year-olds each had 10 percent responsibility of these high-ability future scientists. (16:178) These interest peaks suggest that these grade levels are of prime importance in preparing for the future and for children to be involved in the kind of studies found in future-oriented education.

Frank Stone gives a happy account of a futures day at an elementary school: "One local elementary school devoted part of a day to future thinking and speculation. The kindergarten children had as many ideas as the fourth graders." (17:6)

In "Educating the Youngest for Tomorrow," Harold Shane and June Shane give the following reasons for future-oriented education for the very youngest children:

> There are several obvious reasons why the years ahead are potentially more significant for the young

> than for those now approaching thirty. One of these reasons is simple and mathematical. Of approximately 40 million children who will be age twelve or younger in 1975, all will be thirty-seven or younger in 2000 A.D. The twenty-first century will belong to them. They will teach our grandchildren, work in service occupations, agriculture, or industry, run our government, determine as opinion-makers and as consumers what we read, sing, see, hear, eat, and wear . . . .
>
> Beginning very early, children need experiences that help them to understand the nature of change, to recognize that the future is at least partly malleable --that there are alternative futures among which they can choose . . . .
>
> A third factor of newly increased significance adds to the importance of a future-oriented education begun at the earliest possible age. This factor . . . is the development of techniques and technologies for radically altering the environment with great speed . . . of intervening in the genetic nature of man himself. Our Jovian powers suggest that today's children will possess, before long, a tremendous and extended capacity for doing either grievous harm to their species and to their environment, or a great deal of good.
>
> If it is true that basic patterns of human behavior are fixed at an early age--and the data is increasingly persuasive--then it becomes important at the earliest possible age to teach for tomorrow so that man can regain as rapidly as possible the needed balance between wisdom and the mere exercise of technological power. (18:182-183)

Interviews with educators who have incorporated future-oriented learning into their classrooms gave further substantiation for teaching the future at an early age. Gwenn Morlan, who taught future-oriented concepts in both second and fifth grades, felt that these children became "more open to various ideas and were not as apt to lock themselves into a pattern of "this is the way it has to be.'" (19:Interview) Gloria Loventhal, who taught future-oriented concepts in fifth and sixth grades, felt that her students had developed much better coping skills and self-

awareness through her future-oriented curriculum. (4: Interview)

Both educators reported a high level of enthusiasm from their students. They stated that teaching future-oriented concepts was really fun for both the teacher and the students, and they both concluded that educators can begin to teach the most simplified, basic future-concepts at the kindergarten level.

Another reason why future-oriented education is important at an early age is because children themselves have become increasingly aware of their own possible futures. The following example, based upon the experience of a student teacher in a fifth grade classroom, poignantly demonstrates this.

The student teacher had become involved with tutoring several of the slower children in the classroom. As is often the case with student teachers, the children felt freer to talk to her and often spoke openly about their problems. One of these children was a boy who had become increasingly unmotivated for no apparent reason. The student teacher decided to ask the boy directly what was wrong, if anything. The answer she received, and the manner in which it was given, stunned her.

The child was silent for a moment, then, his face became pained and distorted emotionally. In utter anguish, he spoke softly and heavily, "I'm a failure! I'm a failure!" Tears ran down his cheeks; he tried to cover them with his

hands. Finally, the child continued, "My grades are so bad, I'll never be able to go to college, and I'll never amount to anything at all. I don't have any future at all. I'm just a failure."

This young child who was of normal intelligence, who had inventive talent, and who was blessed with artistic creativity, had stopped trying because he was convinced that the future held nothing of value for him. He had no knowledge of possible alternative choices. He had no training in self-awareness or in self-esteem. His complete unawareness of the real world and his relationship to that world (and his future) served to defeat him at this very early age. Unfortunately, the pain this young boy was experiencing is also experienced by thousands of other children. Most of these children remain silent and their anguish goes unnoticed by adults who assume that children, because they are children, have no problems. (20)

FUTURE-ORIENTED CURRICULA

The broader concepts of future-oriented education are fairly well defined and established. However, the curricula used by educators interested in future-oriented education may vary substantially.

Draper L. Kauffman, Jr.

According to Draper Kauffman, Jr., there are three major approaches for bringing the future into the classroom.

He states these approaches in his book Teaching the Future. The three approaches are: ". . . using the future as an organizing principle, 'futurizing' the classroom, and teaching the basic skills for futures thinking." (1:27-45)

Using the future as an organizing principle. Kauffman's first approach is to use the future as an organizing principle in which case the future is used as a focal point around which the varied subject matter is taught. By selecting elements identified as those which would best prepare the student for the world, and for the greatest amount of possible change, an emphasis is put on flexibility and diversity, and the ability to learn new skills quickly. This leads to a curriculum built around areas of competence. Kauffman gives one possible design, using six areas of competence, which are: access to information, thinking clearly, communicating effectively, understanding man's environment, understanding man and society, and personal competence. Kauffman sees these six areas as a complex system of interrelated parts.

The information that goes into these areas and to the students is chosen, not solely on the premise that the student "ought" to know it, but according to four interrelated considerations: ". . . student interest and motivation, utility for teaching the desired skill, breadth and diversity of student experience, and intrinsic value of the information." Kauffman then presents a table of "Learning

Objectives For a Future-Oriented Curriculum" in which he categorizes many of the subjects and skills under the six main areas of competency. To illustrate this method, the following main competency area is given as shown in Kauffman's book:

Access to Information

Reading
Listening and seeing
Direct experiment
Libraries and reference books
Computerized data-retrieval
Data from newspapers, businesses, government agencies, etc.
Asking experts
Judging reliability
Managing information overload

In order to teach futures studies in this manner, one is talking in terms of an entire curriculum and a schoolwide program. (1:27-33)

"Futurizing" the classroom. The usual situation at this time is that of one teacher who is interested in future-oriented education striving to develop his or her own program in the classroom. Such teachers have to experiment on their own with students who are past-oriented. As his second example, Draper Kauffman explains how teachers can do this even in a quite conventional school.

Teachers can start by exposing their students through discussion periods which are used to explore students' futures and possible futures of our society. Another thing teachers can do is to emphasize active learning,

"learning by doing." The teacher can bring in content from sources other than the usual and have students demonstrate their learning in a way which requires a range of interpersonal and communications skills. Kauffman advises teachers to get their students "out of the classroom and into the real world," and to "bring the real world into the classroom." He advises teachers to democratize their classrooms, and to allow students to have something to say about what happens in the classroom and give them opportunities to make choices. Let them make some mistakes, and learn in an atmosphere that is less authoritarian and less frightening.

Kauffman adds another dimension to futurizing the classroom. He considers the psychological attitudes children might have toward the future ranging from fear to overly-optimistic. He suggests encouraging students to seek out alternative answers, to see the shades of gray, and to be imaginative. (1:33-42)

Teaching the basic skills for futuristic thinking. The third approach to bringing future-oriented teaching into the classroom is by "teaching basic skills for futuristic thinking." To do this, age level is of concern according to the material to be presented. If algebra is required, the age level and expected background would have to fit that requirement. The teacher is advised to be practical and to do what is best in his/her situation. Kauffman devotes the next eight chapters of his book to a basic future studies

curriculum from which teachers can choose and develop the content according to their own needs. (1:42-45)

Harold G. Shane and June Grant Shane

Harold and June Shane offer a comprehensive approach to futurizing education in "Educating the Youngest for Tomorrow" from the book Learning for Tomorrow, edited by Alvin Toffler. While their approach is broad and uses the future as an organizing principle, it is also applicable to futurizing a single classroom and can be used as a guide for teaching basic futures skills. It is of particular importance to note that the Shanes are concerned with elementary education and with children whose ages are generally twelve and under. (18:195)

Basically, the Shanes concern themselves with several main reasons for futurizing the classroom, and they build a course of action upon these reasons. The reasons they give include the fact that one day the world will be in the hands of the children now being taught. Children need to understand the nature of change in order to cope and to bring about a good future. Today's children will one day be in charge of scientific advances that could change the world, and they need the wisdom to handle this responsibility wisely. Children need a good future-focused role image. (18:182-183)

Education as an agent of change. The first viewpoint the Shanes discuss is that of using education as an agent of

change. To achieve this, a number of methods and objectives are given for teachers. The use of inquiry along with development of open-mindedness; responsibility to one's society; developing and using instrumental skills; developing and using expressive skills; and developing "the will to laugh (with kindness and compassion as needed)." The Shanes also state that ". . . futurizing education implies that the learner will begin to sense and to accept both the constraints and the advantages of freedom." They emphasize that future-oriented education increases rather than decreases inequality in the sense that it increases individuality and individual expression. (18:183-184)

Congruence with tomorrow. In order to back up their methods and achieve their objectives, Harold and June Shane emphasize that the right content is needed. They feel that:

> Content, as the term is used here, transcends the conventional educational subject-matter input of the elementary school: language arts, mathematics, science, social studies, and so on. Our definition of "content" does not imply the replacement of such subject matter; rather, it broadens the idea of instruction to include all kinds of learning experience associated with schooling. It also offers cues and clues for parents and other adults--not just teachers--to contemplate in their contacts with the twelve-and-under group. (18: 186)

The learner as a resource. The Shane's approach to content is one of active involvement in the classroom. Children are involved in finding out about themselves and projecting an image into the future. Scenarios are used to learn about

the world of the past, present, and future. Alternative choices are made possible along with decision-making. Children are given the opportunity to have a voice in establishing their own objectives. The learner is used as a resource, not in contrived situations, but in experiences that lead into real community experience, with the community becoming a huge teaching aid. In turn, the community is used as a resource where children go beyond the confines of the schoolroom to explore their world. (18:188-190)

Learning future-oriented skills. The need to learn future-oriented skills is discussed as part of this curriculum. Children need to learn how to cope with change and how to plan ahead. These goals can be achieved in part through discussion and building an awareness of what is going on right now in the child's world and its possible effect on the future. The future-oriented climate needed for this is one that encourages participation and maximum self-realization.

Ending age segregation. Harold and June Shane also feel that in order to create the right climate for learning, there has to be an "end to age segregation." By this, they mean that ". . . the graded-school concept must be abandoned and age-grouping replaced by short-term or ad-hocratic groupings built around child interests, purposes, tasks, discussions, and comparable activities." (18:194-196)

FUTURE-ORIENTED GOALS AND CONCEPTS IN EDUCATION

William C. Kahl and the State of Wisconsin

In early 1972, William C. Kahl, Superintendent of Public Schools for the State of Wisconsin, delivered his charge to the educational Task Force Committee chosen to develop statewide goals for educating elementary and secondary students. In his letter to the committee, Kahl suggested that the Task Force ". . . be more concerned with what public education in Wisconsin ought to be like ten years from now than with the question of where education is today." The Task Force Committee of twenty-nine citizens responded by stating in their report:

> The goals for Wisconsin's public schools should be future-oriented. This committee has been more concerned with what public education in Wisconsin ought to be like ten years from now than with the question of where education is today. Without being bound by present course offerings and programs, this committee sought to identify the common kinds of knowledge, skills and attitudes that individuals will need following graduation from high school ten years from now.

The kinds of goals chosen by the Task Force are those that are general, timeless, and not concerned with particular achievement within specified time periods. The goals were learner-oriented, community-oriented, and future-oriented. The concepts chosen were those most closely related to the goals and those which would best facilitate their achievement. (21:1-27)

The Goals and Concepts Chosen by the Wisconsin Task Force

The goals and concepts chosen are listed below as they appeared in the report summary:

1. Self-realization
   The student should know and respect himself/herself; recognize strengths and limitations in setting goals; develop his/her potential to achieve personal goals; have insight into value structure.

2. Human Relations
   Interacting, interrelating with one another and groups. Seeking self-knowledge, and understanding, appreciating, respecting, and showing concern for all human beings.

3. Basic Skills
   Using problem-solving techniques and processes used in decision-making.

4. Career Education and Occupational Competence
   Includes preparing students for alternative occupational, academic and technical programs beyond high school.

5. Cultural Appreciation
   Learning about their own world and other people's worlds.

6. Lifelong Learning
   Because life expectancy is increasing and our rapidly changing world constantly requires new approaches, ". . . it is imperative that individuals be prepared to participate in lifelong learning."

7. Citizenship and Political Understanding
   ". . . it is important that the total school experience offer opportunities for students to learn and practice their roles, rights, and responsibilities within legitimate government." Participation is a means of doing this.

8. Physical Environment
   The students should develop, through experience, the knowledge, skills and attitudes to help society to develop a balanced use of resources recognizing the rights of the present generation and future generations.

9. Creative, Constructive and Critical Thinking
   Developing the ability to cope with change. Developing creativity, imagination, and constructive and critical thinking.

10. The student shall:

    "Be able to deal effectively with situations which are new to his/her experiences."

    "Think and act in an independent, self-fulfilling way and in a considerate and responsible manner toward others."

    "Have skills in the logical processes of search, analysis, evaluation and abstract thinking." (21:1-27)

The goals and concepts chosen by the Wisconsin Task Force Committee are also compatible with the curricula of Kauffman and the Shanes. The related course content and teaching methods that are harmonious to a future-oriented curriculum, goals, and concepts is a vast field in itself and will be dealt with briefly in the pages that follow.

FUTURE-ORIENTED CONTENT AND METHODS

Future-oriented curricula must be supported by meaningful content and activities like any other curricula. Unlike most other curricula, the content and activities tend to be somewhat unique in some areas.

Awareness of Self and Others

Self-awareness and awareness of others implies a humanistic approach. This, in turn, may include values-clarification, communicating with individuals and groups, and learning about other people in remote places and trying

to understand them. (22:263-270)

Creative Expression

Developing creativity and imagination can demand a great deal of the same thing from the educator. Allowing children to create without interference is not always a simple matter. Making things, writing in new ways, expressing their own creative thoughts--these are some of the ways to develop creative expression. Giving children problems to solve by themselves or in groups is another method.

Science Fiction

Activities that explore alternatives and make the mind reach out are useful. Science fiction is now being used in many classrooms to stimulate creativity and imagination. (15:234-256)

Learning by Doing

In future-oriented education, learning is linked with doing. Students are not required to read texts simply to pass an examination. They may, instead, be given an assignment in which they are required to explain why a lack of rain in California affected the food supply and to illustrate this assignment with a chart or a diagram. A group of children might conceivably assign themselves the task of making up a list of books most enjoyed by other students. The student is communicating, exploring, and has a sense of purpose. (2:127-128)

Democratizing the Classroom

The future-oriented classroom is a democratized classroom. For the elementary teacher this means allowing the students to have some voice (control) in what happens in their classroom. (1:34-36)

Alternative Thinking

Through discussions, group planning, and individual presentations, a teacher can involve the students in alternative choices, communications skills, valuing experiences, projecting future plans, interaction, and even modified brainstorming. The students may very well make mistakes, but these are valuable lessons which, if learned in a helping atmosphere, can encourage students to grow and become more tolerant. (18:191-192)

Active Participation

Future-oriented education makes use of games, models, simulations, and scenarios. They help students by bringing the real world closer, by making the student feel like an active participant in the present and future of his world. They build an awareness of change. Students who participate in these activities develop their own judgment, imagination, and creativity. They also become involved--nobody is left out. (23:217-233)

Involvement with the Community

Future-oriented education "uses the community as a

helper and as a resource. It uses the learner in a like manner." Students explore their real world and may even hold down a "job" or help perform some service for the community. This means involvement outside of the classroom. It means "opening the classroom doors to people in the community" who are willing to share with the students. In this interaction much communicating takes place, self-esteem is built, children can develop a sense of the real world and education becomes relevant. (18:189-190)

Learning about Change

An emphasis is put on change and coping with change. There are several ways of achieving this. Linking the past with what is happening today is one method. Through the use of scenarios and "what if" games, the past and present can then be linked to the future. Even children in the fifth grade can learn about exponential growth through the now well-known example of "the water-lilies." Time lines, simple graphs and charts, stock market readings, games, and the daily newspaper can all be incorporated into the learning experience. Thoughtful discussion about change and the implications inherent in changes taking place can give students a better idea of change and how to cope with their rapidly changing world. (24)

Summary

Future-oriented learning is interdisciplinary. It links content into a holistic experience so that students

can better understand their world and where they are in that world. There are innumerable opportunities for the teacher to involve students in the future, and in the related concepts. A particularly outstanding resource to refer to is the series The Social Sciences: Concepts and Values by Harcourt, Brace, and Jovanovich.

FUTURE-ORIENTED LEARNING MATERIALS

Commercial learning materials especially oriented to the future have been gradually increasing in number. A perusal of the latest materials catalogs revealed a number of these materials in each catalog. As the educator becomes increasingly aware of, and involved with future-oriented education concepts, he/she will readily recognize which materials these are. The educator will also be able to "make-do" and "improvise," especially when the budget has long since been used up.

McDanield's List of Subject Areas

In "Tomorrow's Curriculum Today," Michael A. McDanield presents a list of sixteen main subject areas in which there is a need for future-oriented learning materials. This list reflects the spontaneous responses of young people, students, and teachers to the question: "What kind of learning materials will best prepare students for life in the year 2001?"

The first twelve items on the list are for:

Materials that would help maturing individuals to

1. cope with their society.
2. understand themselves.
3. understand their investment in the future.
4. not to feel powerless or impotent.
5. identify with the society they will inherit.
6. understand the nature of change.
7. see the means of affecting the direction of change.
8. understand key social-science concepts and their relation to change.
9. identify roles they can take in the change process.
10. avoid ethnocentrism.
11. incorporate classroom learning into their immediate environment.
12. transfer classroom learning to future responsibilities. (2:104-105)

The next three items on McDanield's list are:

Materials that will help mature individuals to

13. create relevant learning situations.
14. understand the role of maturing individuals in change.
15. connect and become involved with maturing individuals. (2:105)

The last item on the list indicates a need for:

Materials that will help mature individuals and maturing individuals to

16. change immature institutions. (2:105)

McDanield is satisfied that this list ". . . reflects the fact that we are living in special and difficult times." He feels that the list sums up fairly well the objectives of

the Center for Adaptive Learning Curriculum for the Future Project. (2:105)

McDanield's list covers subject areas in which future-oriented learning materials were felt to be needed. It does not tell us what these materials are like or what form they would take. Nor does it give us applications.

Forms of Future-Oriented Learning Materials

The actual forms these future-oriented materials may take are limited only by the imagination. Books, specialized and non-specialized games, learning centers, films, records, tapes, cassettes, specialized learning packages, interrelated-subjects packages and kits, scenarios, projects, plays--these are all possible forms for future-oriented learning materials.

Applications

In considering applications, we have to be prepared for some new variations. Some materials will be used outside of the classroom; some may require special formats; books, or handbooks, not ordinarily required may be desirable; lists of reference materials may be necessary; and the students themselves will be involved in producing materials, and they will need the tools and instructional materials for that kind of involvement.

Sources of Information

The following sources were especially valuable and

are worth noting:

1. Draper L. Kauffman, Jr. Teaching for Tomorrow.

2. Alvin Toffler, ed. Learning for Tomorrow.

3. David C. Miller and Ronald L. Hunt. The Advent Futures Studies and Research Curriculum Guide; The Advent Future Studies and Learning Resources Guide. (26:209 pp.)

4. Harcourt Brace Jovanovich. The Social Sciences: Concepts and Values.

5. Sheldon Brown. "Future Studies and the Bicentennial," The Social Studies.

6. George T. O'Hearn. "Science Literacy and Alternative Futures."

7. Bernard Hollister. "Tracking the Future: A Personal Approach," Media and Methods. (27:26-27, 44-47)

Chapter 3

PROCEDURES

It was the purpose of this project to determine the judgments of fifth and sixth grade teachers regarding their need for future-oriented learning materials.

With interest in future-oriented teaching increasing in the elementary classrooms, and recommendations for future-oriented education at the elementary school level also increasing, it was felt that a study to gain information on the need for future-oriented learning materials could be of value. Such a study could also be used to gather data on the interest of teachers in future-oriented education.

The fifth and sixth grade levels were chosen for two main reasons. The first reason was because certain research suggested that these grade levels represent an age level at which children are at a highly pre-formative and formative decision-making stage. This in turn suggested a true need for future-oriented education at this level. The second reason fifth and sixth grade levels were chosen was because it was felt that at this level the average child would be able to grasp future-oriented concepts well enough to handle most of them.

Several methods of obtaining the needed information were considered. Interviewing was felt to be too lengthy a

process and also a severe encroachment upon the educator's time. Group questioning was also considered, but dismissed due to the numerous problems presented. It was decided that a survey, employing a questionnaire, was the best means of gathering the needed data.

THE QUESTIONNAIRE

In developing the questionnaire, there were several important goals to consider. The questionnaire needed to reflect the broad spectrum involved in future-oriented education, the importance of this area to teachers and, in turn, the importance of future-oriented education in the classroom. Two main goals of the questionnaire were to show whether or not educators had an interest in future-oriented education and, according to their own judgment, whether or not adequate future-oriented learning materials were available to them.

Other considerations had to be taken into account when making up the questionnaire. It was decided to limit the form itself to a single page. The questions had to be designed in such a way that they could be easily, and readily, answered. For this reason, a "yes" and "no" questionnaire was designed so that the educators could rapidly circle their choices. Another important consideration was the fact that the tremendously wide variety of learning materials, with their many possible applications, made the treatment of materials as the main focus of the format

virtually impossible. For this reason, a conceptual framework was chosen for the questionnaire in order to deal with future-oriented materials. A number of concepts dealing with future-oriented education were carefully chosen, and the questionnaire was devised from these concepts. The concepts chosen were gleaned from the research done on the related literature. From these concepts, thirteen were picked for their importance, and also in consideration of the limited amount of space on the form. These concepts were also chosen for their compatibility with fifth and sixth grade learning materials.

The questionnaire was then pre-tested on four teachers. Each pre-test was conducted separately and the reactions and suggestions of each educator gone over in detail afterwards. From these reactions and valuable suggestions, several minor changes came about, and two additional "interest" questions were included at the end of the questionnaire.

No personal information was asked for on the questionnaire, and no differentiation was made between male and female. Due to the many possible classifications existing in the population surveyed, a sincere attempt was made to achieve a stratified random sampling. This was not reflected in the questionnaire itself; it depended completely upon the mailing procedure followed. (The mailing procedure is described in detail later in this chapter.) A summary of the results of the survey was made available upon request at

the end of the questionnaire form.

THE COVER LETTERS

Two cover letters (see Appendix), both done on San Jose State University Instructional Technology Department letterhead stationery, were employed in the survey. The first cover letter was to go to the principal of each school receiving the questionnaire. This letter explained the survey to the principal and expressed the hope that the results would give useful information in the development of curriculum materials applicable to classrooms in Santa Clara County. It was requested that the principal distribute the questionnaire to the fifth and sixth grade teachers in his/her school. A summary of the results was made available upon request.

The second cover letter went to the educators. The purpose of the project was dealt with briefly and in a slightly more personalized manner than in the letter to the principal. The educators were requested to complete the questionnaire by a certain date so that compilation of the data could be done on time for completion of the project. No follow-up mailing was planned, although such a mailing was seriously considered.

The cover letter to the educators defined "future-oriented education" and "future of education" for purposes of clarification as these terms are not always well-known and are understandably confused with each other.

THE PRINTING

The questionnaire and the two cover letters were duplicated by the offset process. Pre-stamped envelopes were purchased from the post office and were printed with a return name and address on the front of each. The usual time for such printing, including collating and folding if desired, ran from two to four days, depending upon the printer and the workload the printer had at the time.

A sheet of instructions stating exactly what was wanted and ordered proved to be an extremely valuable and time-saving device. This sheet of instructions was put with the finished copies which were to be reproduced. A sample of the return, self-addressed envelope was also included along with the copy for that purpose.

THE MAILING

No listings giving the names of teachers, their grade levels, and the school at which the individual teachers taught were available for private use. Visits to the county offices, district offices, and even some schools were of no avail. The answer was, in all cases, "It is against our policy (or County policy) to give out such information." The Santa Clara County Office of Education did provide a listing that gave the names of the school districts in the county, names and addresses of the schools within each district, the phone number for each school, the name of the

principal at each school, the grade levels taught at each school, and the approximate enrollment for each school.

It was decided to make up packets for each school chosen. A total of 500 questionnaires were mailed out to ninety-four schools. A cover letter, a questionnaire, and a self-addressed, stamped return envelope went to each educator. The number of letter-questionnaire-envelope sets that were sent to each school was determined by the student population of the school. Each school packet was made up of the chosen number of questionnaires with their letters and envelopes, and a cover letter to the principal included. Each packet envelope was individually addressed to the particular principal and school it was mailed to.

The packets were then divided according to probable weight. One packet from each set was taken to the post office, each one weighed, and the correct postage ordered to cover the entire mailing. Third-class mailings are possible, and can be less costly, when time permits and if your mailing complies with the postal regulations for third-class mailings. This should be checked on at the time you plan your questionnaire.

Chapter 4

SURVEY RESULTS AND ANALYSIS OF FINDINGS

In order to give the survey credibility, a population goal of 100-150 was established as being a representative sampling. It was desirable that this be a stratified random population sampling (see p. 43). A cut-off point of 150 returns was held to in order that analysis of the data could be completed on schedule.

Of the 500 questionnaires mailed to ninety-four schools, a total of 174 questionnaires were returned. It was noted that not all of the schools were represented in the return, and a few districts chosen were not represented. One thoughtful principal sent back the entire packet mailed to that school with a note inside explaining why that school did not take part in the survey: "Policy requires us to go through a committee at the District Office before we can do this." There may have been other principals in a similar situation. Although a number of schools and districts did not respond, it was determined that a random stratified sampling had been achieved and the population goal of 100-150 was also met.

The first step in analyzing the data from the questionnaire was tallying the responses. Responses to each question were tallied separately in order to insure

accuracy. Due to the large number of "no responses," this category was included for all questions. Where a question mark appeared instead of a circled answer, where both "yes" and "no" answers were circled in the same column, and where no answer was circled, those answers were tallied as "no response" answers. The results of the tally served as the basis for further analysis.

Concepts "a," "b," and "c" on the questionnaire were related in that they all dealt with developing the individual's potential through instilling feelings of self-worth and control over one's own life. All three concepts were found to be taught by most of the respondents. Concept "a," "Building self-esteem and confidence," ranked second in "I teach this now" with 143 teachers using this concept. Concept "a" showed that fifty-five teachers felt adequate learning materials were available and eighty-one felt adequate learning materials were not available. Although concept "b," "Having some control over one's own future," ranked ninth, 120 of the educators taught this concept. Thirty-six teachers said adequate learning materials were available and ninety-two said they were not. Concept "c," "Developing the ability to make choices," ranked first, the highest of all, with 144 of the educators answering "yes" in the "I teach this now" column. Sixty-two of the educators felt learning materials were adequate while seventy-one felt learning materials were not adequate for this concept.

Concepts "d" and "e" were concepts concerned with

interacting and communicating effectively with others. These concepts came out fairly close to one another in the "I teach this now" ranking. Concept "d," "Connecting and becoming involved with others," ranked seventh with 130 educators teaching this concept. Forty-seven felt learning materials were adequate and seventy-eight felt they were inadequate. Concept "e," "Communicating effectively with others," received a ranking of four-and-one-half with 137 teaching the concept. Sixty-five teachers felt learning materials were adequate and sixty felt that learning materials available were not adequate.

Concepts "f," "g," and "h" were all related to the role of the individual in a rapidly changing world. This is the area of "future shock" and, conceptually, still quite new. It was not surprising, therefore, to find all three items had the lowest rankings for "I teach this now." Concept "f," "Understanding the nature of change and its effects on society," ranked twelfth with eighty-four of the teachers indicating that they taught this concept. Only thirty-seven felt that adequate learning materials were available while eighty-three felt that adequate learning materials were not available. Concept "g," "Understanding the role of individuals in change," ranked thirteenth, or lowest, of the concepts. Only seventy-seven educators taught this concept. Twenty teachers said that adequate learning materials were available and ninety-seven felt that there were not adequate learning materials available.

Concept "h," "Developing adaptability to change," ranked eleventh with ninety-six teachers using this concept in their teaching. Thirty-two of the teachers thought that there were adequate learning materials and eighty-five indicated there were not enough materials available.

In an age when despair so often takes the place of hope, future-oriented education attempts to build confidence in the future and man's ability to shape that future in desirable directions. Concepts "i" and "j" dealt with those concerns. Concept "i," "Building confidence that one can influence the future in desirable directions," ranked tenth with 105 of the teachers teaching this concept. Thirty-eight said adequate learning materials were available, and eighty-five felt that the learning materials were inadequate. Concept "j," "Developing a hopeful attitude toward one's own future," ranked eighth. One-hundred-twenty-three of the educators taught this concept. Thirty-eight considered that the learning materials available were adequate and eighty-seven felt that learning materials were inadequate.

Concepts "k" and "l" were concerned with the individual's ability to solve problems, make decisions, and organize thought processes. Concept "k," "Developing the ability to do one's own research," ranked sixth with 131 teaching the concept. Seventy-nine of the educators felt that adequate learning materials were available, and forty-five felt that the materials were not adequate. Concept "l,"

"Actively engaging in problem solving and decision making," ranked third with 138 of the educators teaching this concept to their students. Seventy-one said the learning materials available were adequate, and sixty felt that the learning materials were not adequate.

Concept "m," "Building a desire for continuous learning," is not easily applied and not usually measured. In future-oriented education, this is actually taught as a concept to be learned, and as being necessary in a world where individuals must continually add to their knowledge or become outdated. The educators demonstrated their awareness of this, and concept "m" had a ranking of four-and-one-half with 137 teachers including this in their teaching in some form. Fifty-three felt that adequate learning materials were available while sixty-eight felt that adequate learning materials were not available.

The "interest" questions on the questionnaire were responded to as follows:

"I am interested in using Future Concepts in my curriculum." "Yes" replies totalled 107, "no" replies totalled twenty-three. Twenty made no response.

"I am interested in Future Oriented learning materials for teachers." "Yes" replies totalled 105, "no" replies totalled twenty-five. Twenty made no response.

"I am interested in Future Oriented learning materials for use in the classroom." "Yes" replies totalled 107, "no" replies totalled twenty-three. Twenty made

no response.

"I am interested in receiving a copy of the survey summary." "Yes" replies totalled seventy-one, "no" replies totalled fifty-three. Twenty-six made no response.

It is important to point out the fact that seventeen of the twenty "no response" replies were from respondents who made no response at all to any of the interest questions.

Figures 1 through 6 present the results described above.

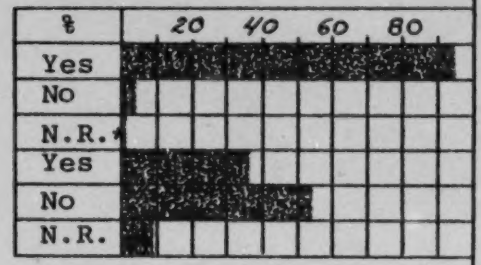
It was considered desirable by the writer to determine if availability of instructional material correlated with what was taught, and for this purpose, the Spearman-Brown rank-difference formula was used. The "I teach this now" rankings and the "Are adequate learning materials available" rankings were compared in order to determine the correlation coefficient index number. The final result showed a high positive correlation (rho = .833) significant at the .01 level (Tables 1 and 2).

Question a:

Building self-esteem and confidence.

I teach this now.

Are adequate learning materials available?

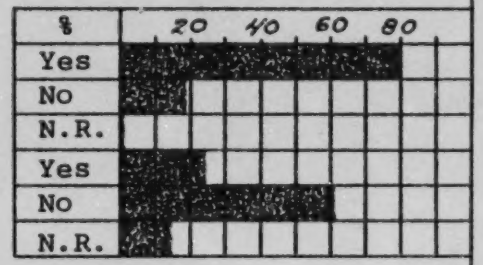


Question b:

Having some control over one's own future.

I teach this now.

Are adequate learning materials available?

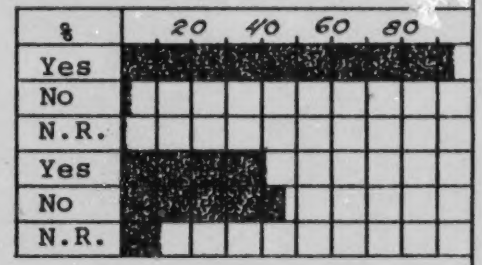


Question c:

Developing the ability to make choices.

I teach this now.

Are adequate learning materials available?



*N.R.: No Response

Figure 1

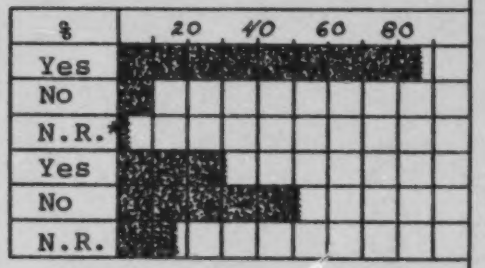
Results of Questionnaire
Questions a-c

Question d:

Connecting and becoming involved with others.

I teach this now.

Are adequate learning materials available?

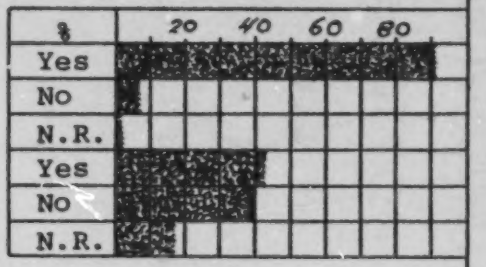


Question e:

Communicating effectively with others.

I teach this now.

Are adequate learning materials available?

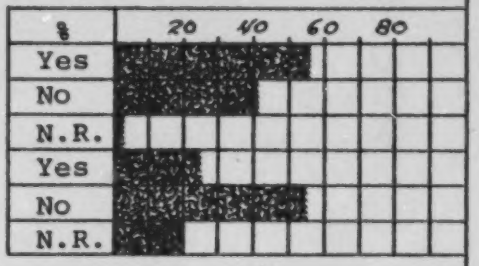


Question f:

Understanding the nature of change and its effects on society.

I teach this now.

Are adequate learning materials available?



*N.R.: No Response

Figure 2

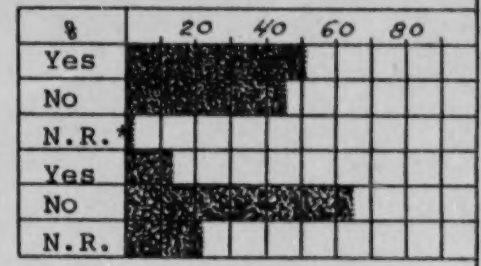
Results of Questionnaire
Questions d-f

Question g:

Understanding the role of individuals in change.

I teach this now.

Are adequate learning materials available?

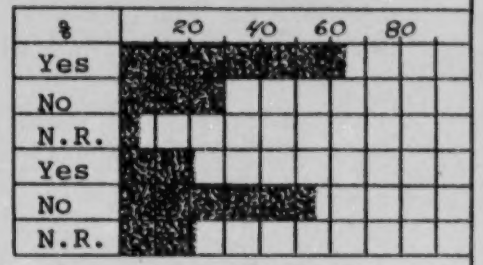


Question h:

Developing adaptability to change.

I teach this now.

Are adequate learning materials available?

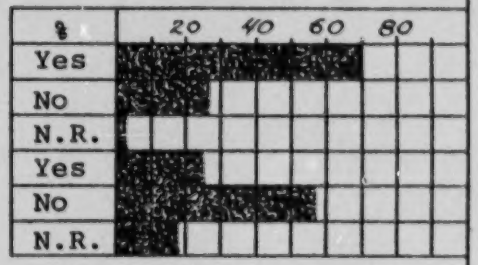


Question i:

Building confidence that one can influence the future in desirable directions.

I teach this now.

Are adequate learning materials available?



*N.R.: No Response

Figure 3

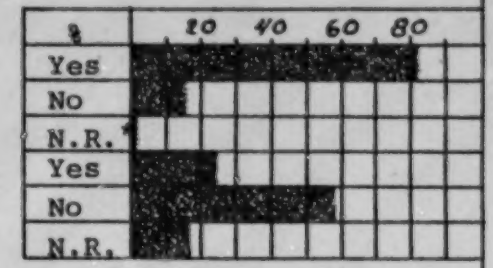
Results of Questionnaire Questions g-i

Question j:

Developing a hopeful attitude toward one's own future.

I teach this now.

Are adequate learning materials available?

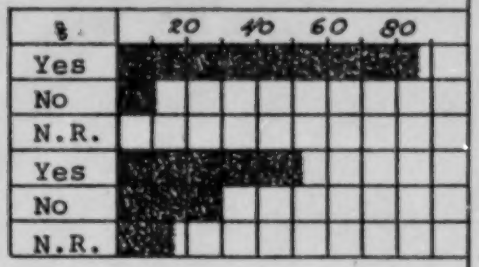


Question k:

Developing the ability to do one's own research.

I teach this now.

Are adequate learning materials available?

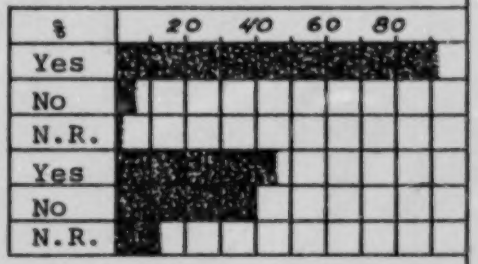


Question l:

Actively engaging in problem solving and decision making.

I teach this now.

Are adequate learning materials available?



*N.R.: No Response

Figure 4

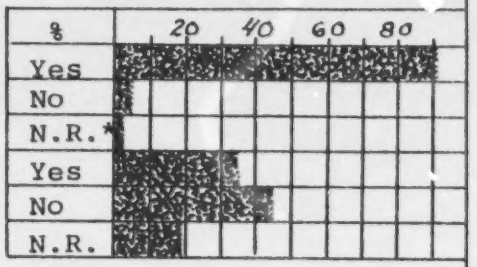
Results of Questionnaire
Questions j-l

Question m:

Building a desire for continuous learning.

I teach this now.

Are adequate learning materials available?



*N.R.: No Response

Figure 5

Results of Questionnaire
Question m

Table 1

Percentages of Positive Responses to Questions, Showing Percentage of No-Responses

Question	Percent Teaching This Now	Percent No Response	Percent with Adequate Learning Materials	Percent No Response
a	95	1	37	9
b	80	1	24	15
c	96	1	41	11
d	87	3	31	17
e	91	2	43	17
f	56	3	25	20
g	51	3	13	22
h	64	6	21	22
i	70	3	25	18
j	82	2	25	17
k	87	1	53	17
l	92	2	47	13
m	91	3	35	19

Table 2

Correlation of What Was Taught with Availability of Materials

Question	Availability Ranking	Now Teaching Ranking	D	D^2
k	1	6	5	25
l	2	3	1	1
e	3	4.5	1.5	2.25
c	4	1	3	9
a	5	2	3	9
m	6	4.5	1.5	2.25
d	7	7	0	0
i	8.5	10	1.5	2.25
j	8.5	8	.5	.25
f	10	12	2	4
b	11	9	2	4
h	12	11	1	1
g	13	13	0	0
			ΣD^2 =	61.0

$$rho = 1 - \frac{6 \Sigma D^2}{N (N^2 - 1)} = 1 - \frac{6 \cdot 61}{13 (13^2 - 1)}$$

$$= 1 - \frac{366}{13 (168)} = 1 - \frac{366}{2184}$$

rho = 1 - .167

rho = .833

This shows a high positive correlation significant at the .01 level.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The purpose of this project was to determine the need for future-oriented learning materials at the fifth and sixth grade levels by means of a survey. This need was dependent upon the judgments of the teachers regarding their individual needs for future-oriented learning materials.

The results of the Spearman-Brown rank-difference correlation coefficient showed a high positive correlation significant at the .01 level, when measuring the relationship of what is taught with availability of materials to teach the concept. In turn, this result suggested that a strong relationship existed between teaching future-oriented concepts and the availability of adequate future-oriented learning materials. Wherever adequate learning materials were available, the tendency was for the educator to teach the concept.

The large number of "yes" answers to the "interest" questions clearly indicated a correspondingly high level of interest in future-oriented education.

It was determined that there was a high level of interest in future-oriented education and that there was a

strongly related need for future-oriented learning materials in order for educators to be able to teach future-oriented concepts at the fifth and sixth grade levels.

RECOMMENDATIONS

The results of the survey established a strong need for providing future-oriented learning materials for fifth and sixth grade educators in Santa Clara County, California.

It was therefore recommended that future-oriented learning materials should be provided for the teachers and/or that workshops for the development of future-oriented learning materials for the classroom be started. It was also considered feasible to develop a future-oriented learning-instructional kit for teachers for the fifth and/or sixth grade levels.

In the event that similar projects may be undertaken in the future, several recommendations were made. To insure a stratified random sampling, the researcher should consider contacting school districts in advance to affirm their cooperation. The possibility of group sampling could be considered. A different set of future-oriented concepts could be used and the results compared to this study. Finally, to assure the researcher of an adequate sampling, or a larger sampling, if desired, the possibility of follow-up mailings might be considered. A second and even a third "follow-up" mailing might possibly double or triple the returns.

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(20) Jeanne Flynn, Personal Experience, San Jose, California, 1970.

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APPENDICES

APPENDIX A

ERIC DIALOG SEARCH BIBLIOGRAPHY

User 502 Date: 2mar77 Time:15:38:13 File: 1

Set	Items	Description
1	66	FUTURE(W)ORIENTED
2	1	FUTURES(W)ORIENTED
3	14205	INSTRUCTIONAL MATERIALS
4	0	
5	841	INTERMEDIATE GRADES
6	999	GRADE 5
7	1097	GRADE 6
8	1184	SCHOOL SURVEYS
9	4	(1OR2)AND3
10	1	(1OR2)AND(5OR6OR7)
11	4	9OR10
12	67	1OR2

Print 12/5/1-67

Search Time: 0.115 Prints: 67 Descs.: 9

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*This was the only survey related to intermediate grade levels. The survey covered subject areas of main interest to students.

APPENDIX B

LETTERS AND QUESTIONNAIRE

San José State University
SAN JOSE, CALIFORNIA 95192

SCHOOL OF EDUCATION

Instructional Technology Department (408) 277-2631

Dear Principal,

I am doing a survey on Future Oriented Learning Materials for the Instructional Technology Department for San Jose State University. We hope the results will give us the information useful in developing curriculum materials which may be widely applied to classrooms in Santa Clara County.

I would appreciate it a great deal if you will please distribute the enclosed questionnaires to your fifth and sixth grade teachers. I want to emphasize that no personal information of any kind is asked for.

The results of the survey will be used in the survey portion of my paper. A summary of the results of this survey will be made available to you upon request.

Thank you for your cooperation.

Sincerely,

Jeanne Flynn

Jeanne Flynn
Futures Project Director

San José State University
SAN JOSE, CALIFORNIA 95192

SCHOOL OF EDUCATION

Instructional Technology Department (408) 277-2631

Dear Educator,

I am directing a Futures Survey for the Instructional Technology Department at San Jose State University. I am also an elementary teacher. For several years, I have been interested in the role Futures plays in education, and particularly its possibilities in the elementary curriculum.

The project will include literary research and materials compiled from teacher and student questionnaires. It is limited to fifth and sixth grades within Santa Clara County, California.

I would appreciate it if you would please complete the attached form and return it to me in the enclosed, self-addressed, stamped envelope by _____. Your information will be used in the survey results and the summary. If you would like a copy of this section of the paper, please notify me and include your name and address.

The following definitions may be helpful to you for clarification:

Future Oriented Education: Informal and/or formal classroom exploration of possible, probable, and preferable alternative futures of individuals and of society, and the special problems and opportunities relating to those futures.

Future of education: A possible course of future events related to education. Not the same as Future Oriented Education.

Thank you for your help.

Sincerely,

Jeanne Flynn

QUESTIONNAIRE FOR EDUCATORS

The following list contains many of the concepts used in a Future Oriented Curriculum. Please circle yes or no in the boxes following each concept.

	I Teach This Now		Are Adequate Learning Materials Available	
a. Building self-esteem and confidence.	yes	no	yes	no
b. Having some control over one's own future.	yes	no	yes	no
c. Developing the ability to make choices.	yes	no	yes	no
d. Connecting and becoming involved with others.	yes	no	yes	no
e. Communicating effectively with others.	yes	no	yes	no
f. Understanding the nature of change and its effects on society.	yes	no	yes	no
g. Understanding the role of individuals in change.	yes	no	yes	no
h. Developing adaptability to change.	yes	no	yes	no
i. Building confidence that one can influence the future in desirable directions.	yes	no	yes	no
j. Developing a hopeful attitude toward one's own future.	yes	no	yes	no
k. Developing the ability to do one's own research.	yes	no	yes	no
l. Actively engaging in problem solving and decision making.	yes	no	yes	no
m. Building a desire for continuous learning.	yes	no	yes	no

I am interested in using Future Concepts in my curriculum. Yes No

I am interested in Future Oriented learning materials for teachers. Yes No

I am interested in Future Oriented learning materials for use in the classroom. Yes No

I am interested in receiving a copy of the survey summary. Yes No

If so, please give your name and address:

Name_____ Address_____

_____

COMMENTS: Please put any you may have on the back of this sheet.

APPENDIX C

COMMENTS OF SURVEY RESPONDENTS

1. "I feel a Future Oriented Curriculum is really important! Thanks for caring about it. I would like to share some things with you."

2. "Most of these things don't call for materials - rather for processes - or personality traits on the part of the teacher. Sometimes I think the dependence some teachers have on 'materials' is ludicrous. You shouldn't teach if you can't think. Futuring can be taught using the media resource books and only in a class that fosters thinking. How about teaching the teachers to think and be creative - <u>then</u> maybe they could model it for children to learn."

3. "I believe most of the concepts you list can be integrated into the subjects I already teach - math, reading, history, science, etc. I would never have a period for "future-oriented study" - although I build self-esteem, discuss individual possibilities for change and have children actively engage in problem solving in other areas. That is my reason for checking "yes" to all the "Are adequate materials available." There may not be actual <u>materials</u> - but I have so many opportunities to get these lessons across, I don't need <u>materials</u> solely dedicated to the purpose of teaching them."

4. "I'm retiring (early) at the end of the school year. Will be a consultant for the district."

5. "I have been teaching self-awareness and career awareness in my classroom. I feel that it is extremely important that children develop awareness about 'self' and what one would like to accomplish in the future. Thanks."

6. "It is unfortunate that more emphasis on Future Oriented Education is not given. Am interested in knowing the result of this survey."

7. "Curious as to the materials. How can you develop materials to serve the types of intrinsic concepts you are stating? Most of these concepts are <u>totally</u> dependent on the teacher and the structure of the class."

8. "Interested in hearing (learning) the basic fundamentals of Future Oriented Education."

9. "I feel that materials are available. I've had classes in values clarification and teach process not content and daily teach, encourage, and use decision making processes. I do not use a textbook approach to teaching nor think it necessary -- magazines, newspapers, the world around and individual students plus me as consultant are used as teaching materials. It's called 'life.'"

10. "Self-esteem and self confidence are elements of superlative teaching ideas; they cannot be measured in importance."

11. "My teaching of the areas on the front are mostly through my lectures on 'soapbox'! I would love material in these areas."

12. "My efforts are directed toward teaching the items in Column One. This year I'm not having much success. Many of the tools are inherent in our society and I sort of doubt they can be packaged and sold effectively."

13. "Future Education should emphasize the basics!"

14. "I have never sought such materials."

15. "It seems that materials directed toward any 'futures' items are confined to 'enrichment' materials or must be 'inferred' from a whole book that is usually Soc. Sci. and above the reading level being taught.
I would like readers that were content designed to include data and values mentioned on reverse.
Those most needing such information usually never get out of a basal story book and basic math."

16. "Many of the concepts do not need specific curriculum or learning materials to be taught effectively."

17. "Thanks. Future of education (not Future Oriented Education) sounds interesting. We (other 4 to 6) have used AIR (AM Independent Research Assn) stuff for a shot at career ed in which we did the "A-M' activities but that was a short duration (6 wks) bit. Write to _____ and keep us posted."

18. "I teach 5th grade and never have investigated Future curriculum materials. I am interested in Future Education. Please include the name of your research project and where I can get hold of a copy. Thanks."

19. "Many of the areas where I marked "no" on materials, I have my own techniques and materials I've gotten over the years."

20. "At this time I really don't think my views on education are printable."

21. "Perhaps I sound rather negative about these materials in the classroom. Is there no reality of our lives in this society where materialism does not have its effect. Teaching materials are only as effective as the one who uses them. The areas which seem to concern you are areas which concern me also. Yet my teaching is done by interaction and by the manifestation of those goals by my own person in everyday life."

22. "The issues addressed here are Primary issues for the classroom. The affective area must be reached so that cognition can be obtained. This will result in the confluent child."

23. "I am working with an unusually difficult group of sixth graders this year. Discussions are virtually impossible with these children and have been almost impossible since they were in 2nd grade. Many of the topics listed are things that I ordinarily would cover with most groups. While this group sorely needs help in this area, getting them to accept help is another matter.

In short, my answers this year are not the answers I normally would give.

All of the items in the list are important. Finding time for formal study of these items is difficult when the children change teachers for each subject. Teaching most of these must be on an informal basis under our set-up."

24. "The program I teach at _____ is of exceptionally high quality design, after millions of dollars of research in Hawaii. It is called HEP (Hawaii English Program) and is the state-adopted program for the state of Hawaii. My classroom has over $8,000 in special supplies (example: 7 electric typewriters). The program is quite future-oriented."

25. "I develop my own approaches to these areas."

26. "These are values that do not need learning materials but are tied into all subjects taught."

27. "My class is actively involved in the Bread and Butterflies T.V. shows. We do many follow-up activities

using teacher made worksheets based on the T.V. teacher's guide supplied by Channel 54. Also, the D.O. purchased a kit from Education Achievement Corporation, The Valuing Approach to Career Education, K-8 series which I use with the class.

28. "These items have been checked 'yes'. However, it should be noted that these concepts are not consciously taught. That is to say, I've not specifically set a time for the teaching of these ideas. Rather hopefully they are a part of the learning and the attitudes and atmosphere generated from such learning."

29. "I wish someone would come up with a word other than 'teach'. I 'teach'. Children 'learn'. Yet children learn without teaching. Teaching does not mean 3) children learn."

30. "Answers checked 'no' are not taught separately. They are a part of daily learning in the classroom through living with others and working on regular class subjects."